TYUMENTSEV, I.I.; BOCHKAREV, V.R.

Power engineers of the Altai region and the Rubtsovsk industrial district are fighting for savings in electric power. Prom. energ. 15 no.12:49 D '60. (MIRA 13:12)
(Altai Territory--Electric power)

BOCHKAREV, V.S.

Genesis of petroleum in the Chelyabinsk brown coal basin. Geol. nefti i gaza 5 no. 5:45-49 My '61. (MIRA 14:4)

1. Gorno-geologicheskiy institut Ural'skogo filiala Akademii nauk SSSR.
(Chelyabinsk basin—Petroleum geology)

BOCHKAREV, V.S.

Upper Paleozoic of the eastern slope of the Urals and trans-Ural region. Sov. geol. 8 no.1:137-140 Ja '65.

(MIRA 18:3)

1. Sibirskiy nauchno-issledovatel'skiy institut geofiziki, geologii i mineral'nogo syr'ya.

BOCHKAREV, V.S.

Tectonics of the Chelyabinsk coal-bearing basin and its oil potential. Trudy Inst. geol. UFAN SSSR no.63:113-139 '62.
(MIRA 16:12)

BOCHKAREV, V.S.

Geotectonic conditions governing the formation of the Lower Mesozoic depressions in the eastern slope of the Urals and the trans-Ural region. Izv. AN SSSR. Ser. geol. 29 no.9: 42-52 S '64. (MIRA 17:11)

1. Institut geologii Ural'skogo filiala AN SSSR, Sverdlovsk.

Bochkarev, V. V.

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PHASE I BOOK EXPLOITATION SOV/6333

Bochkarev, V. V., ed.

Tekhnika izmereniye radioaktivnykh preparatov; sbornik statey (Techniques for the Measurement of Radioactive Preparations; Collection of Articles) Moscow, Gosatomizdat, 1962. 4600 copies printed.

Eds.: A. M. Smirnova and M. A. Smirnov; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for specialists in nuclear instrumentation.

COVERAGE: The book is a collection of articles on recent developments in 1) measurement of the activity and 2) analysis of the composition of emissions of radioactive preparations. The methodology and apparatus used in these studies are described in detail. References are given at the end of each article.

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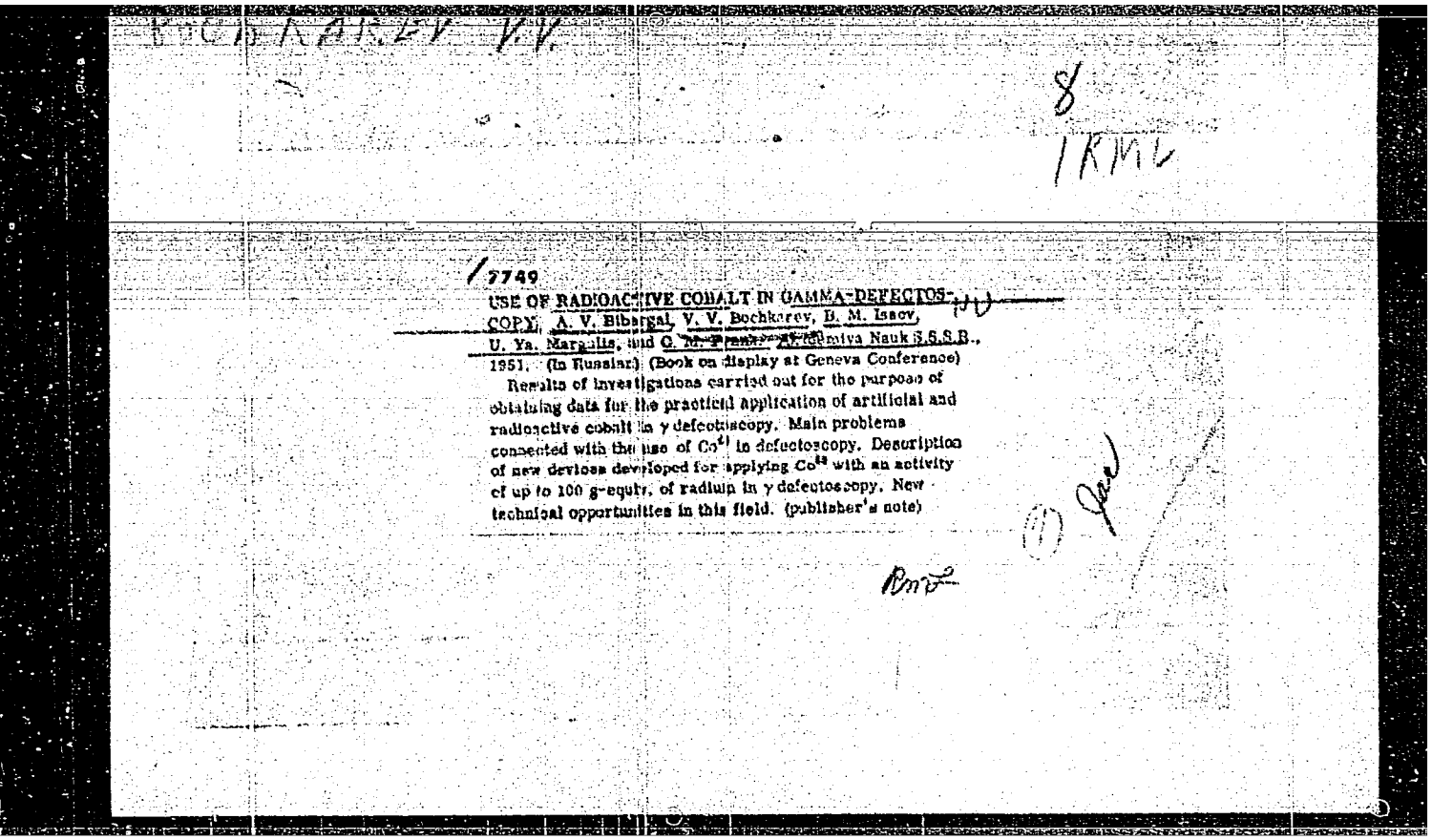
BAZHENOV, V.A.; BOCHKAREV, V.V.; SOKOLOVA, T.N.

Sorption effects in measuring the activity of gaseous substances. Izm.tekh. no.2:57-59 F '63. (MIRA 16:2)
(Radioactivity--Measurement) (Sorption)



BIBRAIEV V.V.

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USE OF RADIOACTIVE COBALT IN GAMMA-DEFECTOS-
COPY. A. V. Bibergal, V. V. Bochkarev, B. M. Isaev, U. Ya. Margolis, and G. M. [illegible] Gosizdat Nauk S.S.S.R., 1951. (In Russian) (Book on display at Geneva Conference)

Results of investigations carried out for the purpose of obtaining data for the practical application of artificial and radioactive cobalt in γ defectoscopy. Main problems connected with the use of Co^{60} in defectoscopy. Description of new devices developed for applying Co^{60} with an activity of up to 100 g-equiv. of radium in γ defectoscopy. New technical opportunities in this field. (publisher's note)

BOCHKAREV, V.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 403 - I

BOOK Call No.: AF628289

Authors: BOCHKAREV, V., KEIRIM-MARKUS, I., L'VOVA, M. and PRUSLIN, YA.

Full Title: MEASUREMENTS OF ACTIVITY OF BETA AND GAMMA RADIATION SOURCES

Transliterated Title: Izmereniye aktivnosti istochnikov beta i gamma izlucheniy

Publishing Data

Originating Agency: Academy of Sciences, U.S.S.R.

Publishing House: Publishing House of the Academy of Sciences, USSR

Date: 1953 No. pp.: 242 No. of copies: 5,000

Editorial Staff

Editor: Prof. Groshev, L. V. Tech. Ed.: None

Editor-in-Chief: None Appraiser: None

Text Data

Coverage: The book presents brief basic information on radioactive isotopes as sources of beta and gamma radiation and describes the methods of absolute measurement of the activity of various isotopes by means of widely-adopted measuring devices. About 30 synthetically radioactive isotopes were studied from the view point of their specific radiation characteristics and practical application. All

numerical values, diagrams of disintegration, and other characteristics of the isotopes are quoted mostly from data published prior to 1953. The last chapter of the book is related to the safety methods at work with the radioactive materials.

The book is a reference tool manual for laboratory work giving briefly the most essential information for persons dealing with the measurement of isotope radiation. The book is supplemented with 60 tables and 85 diagrams and charts.

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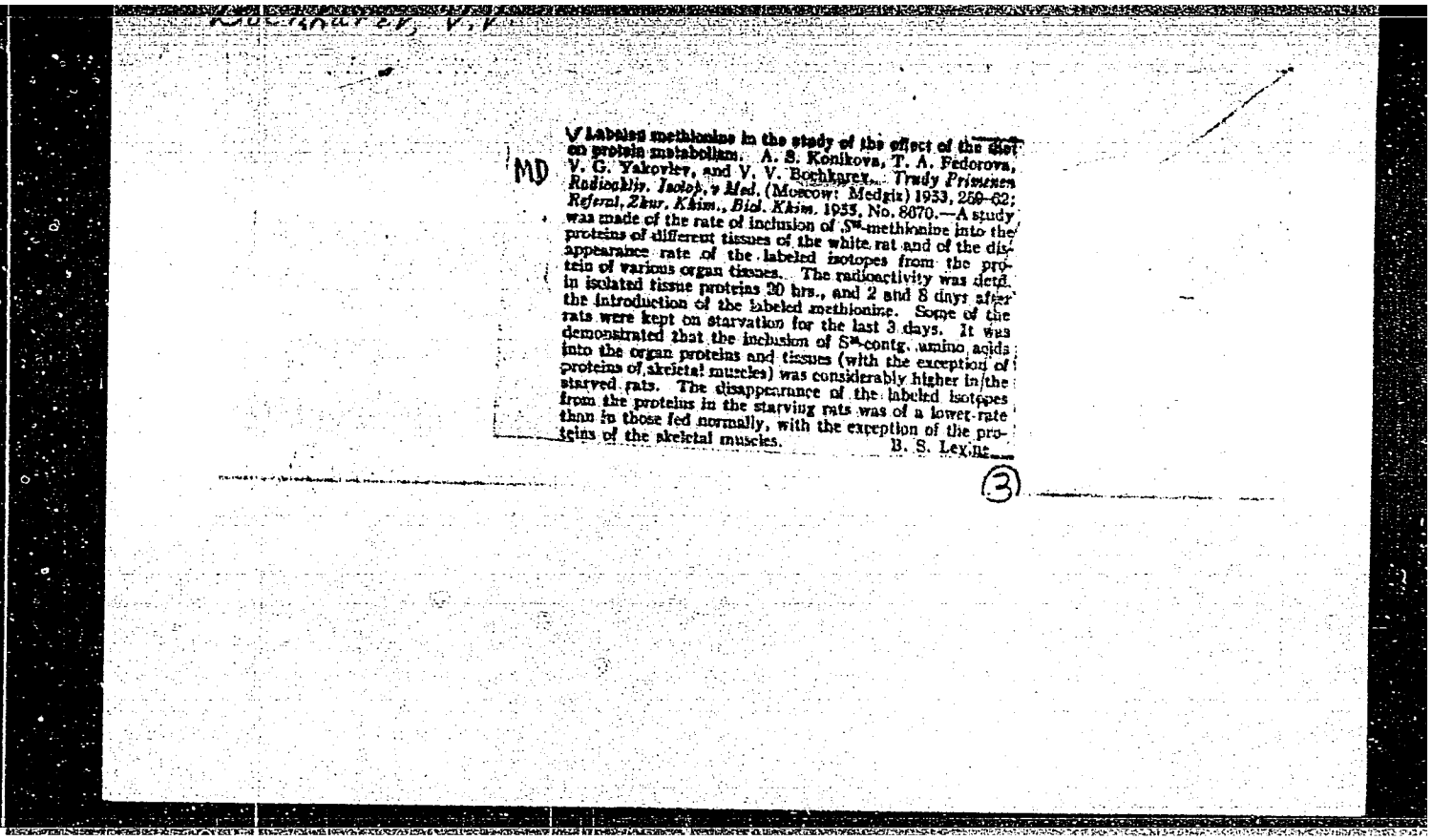
Purpose: Intended as an aid for wide circle of readers, not specially trained in the field of nuclear physics.
Facilities: None
No. of Russian and Slavic References: 160 references, 41 Russian
Available: A.I.D., Library of Congress



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V Labeled methionine in the study of the effect of the diet on protein metabolism. A. S. Konikova, T. A. Fedorova, V. G. Yakovlev, and V. V. Bochkarev. *Trudy Primenen. Radioaktiv. Isotop. v Med.* (Moscow: Medgiz) 1953, 259–62; *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 8670.—A study was made of the rate of inclusion of S^{35}-methionine into the proteins of different tissues of the white rat and of the disappearance rate of the labeled isotopes from the protein of various organ tissues. The radioactivity was detd. in isolated tissue proteins 20 hrs., and 2 and 8 days after the introduction of the labeled methionine. Some of the rats were kept on starvation for the last 3 days. It was demonstrated that the inclusion of S^{35}-contg. amino acids into the organ proteins and tissues (with the exception of proteins of skeletal muscles) was considerably higher in the starved rats. The disappearance of the labeled isotopes from the proteins in the starving rats was of a lower rate than in those fed normally, with the exception of the proteins of the skeletal muscles.

B. S. Lexina

(3)

YEGOROV, A.P.; BOCHKAREV, V.V. [authors]; FARBER, V.B., doktor meditsinskikh nauk [reviewer].

"Hemopoiesis and iontophoretic radiation." A.P.Egorov, V.V.Bochkarev. Reviewed by V.B.Farber. Terap.arkh. 25 no.3:83-86 My-Je '53. (MLRA 6:9)
(Radiation) (Blood) (Egorov, A.P.) (Bochkarev, V.V.)

BOCHKAREV, V. V. and YEGOROV, A. P.

Blood Formation and Ionizing Radiation, 1954.

BOCHKAREV, V.V.

21(7) PHASE I BOOK EXPLOITATION SOV/1378

Sovremennoye oborudovaniye dlya raboty s radioaktivnymi izotopami; sbornik materialov (Modern Equipment for Working With Radioactive Isotopes; Collection of Materials) Moscow, Izd-vo glavnogo upravleniya po ispol'zovaniyu atomnoy energii pri sovete M-va SSSR, 1958. 110 p. (Series: Atomnaya energiya. Prilozheniye, 1958, no. 5) 8,450 copies printed.

Ed.: Zavodchikova, A.I.; Tech. Ed.: Popova, S.M.

PURPOSE: This book is intended for personnel engaged in activities involving the use of radioactive isotopes.

COVERAGE: This is supplement No. 5 to the periodical Atomnaya energiya for 1958. It contains 3 articles dealing with modern techniques, methods and apparatus for handling radioactive isotopes and may serve as a handbook in this respect. Schematic diagrams and illustrations of modern equipment for the remote handling of radioactive materials are given, as well as detailed descriptions of working principles.

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BOCHKAREV, V.V.

21(5) PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Frolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

Card 1/12

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

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PART I. PRODUCTION OF ISOTOPES

Frolov, Yu.S., V.V. Bochkarev, and Ye.Ye. Kulish. Development of Isotope Production in the Soviet Union 5
This report is a general survey of production methods, apparatus, raw materials, applications, investigations and future prospects for radio isotopes in the Soviet Union.

Kulish, Ye.Ye. Several Problems on Obtaining Radioactive Isotopes with a Nuclear Reactor 18

Dmitriyev, P.P., I.I. Zhivotovskiy, N.N. Krasnov, I.P. Selinov, and Ye.N. Khaprov. Preparing Several Radioactive Isotopes in a Cyclotron With Deuteron Energies of ~10 Mev 26

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Gusev, V.M. Ultra High-temperature Ion Source for the Electromagnetic Separation of Isotopes of Platinum Group Elements 68

This article describes the basic structural features of an ultra-high-temperature ion source and gives the results of its use in separating Pd, Pt, Ru, and Ir in a small electromagnetic separator. A hot cathode discharge is maintained in vapors of the element being separated and isotope ions are drawn from the gas discharge chamber through an aperture. A lateral electron beam with energies of 20-25 kev creates chamber temperatures up to 2800° C.

Alekseyevskiy, N.Ye., A.V. Dubrovin, G.I. Kosourov, G.P. Prudkovskiy, S.I. Filimonov, V.I. Chekin, V.N. Shelyapin (deceased), and T.K. Shuvalova. Utilization of Mass Spectrometers With a Nonhomogeneous Field for Analyzing Isotopes of Light Elements 73

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Myulenfordt, Yu.K., G.G. Zivert, and T.A. Gagua. A Rectification Column for Obtaining BF_3, Enriched With Isotope B^{10} 127

A method is described for enriching natural mixtures containing ~18.6 percent B^{10} concentration to ~80 percent B^{10} concentration by low temperature (~ - 100 degrees, scale not stated) adiabatic rectification. Separation capability was B^{10} of 95-96 percent purity after 480 hours processing; but, as the desired concentration was ~80 percent, separation yield was 4 liters per 24 hours. Block diagrams of installations are given.

Zhavoronkov, N.M., O.V. Uvarov, and S.I. Babkov. Research on the Separation of Stable Isotopes of Light Elements 134

Tunitskiy, N.N., G.G. Devyatykh, M.V. Tikhomirov, A.D. Zorin, and N.I. Nikolayev. Separation of Carbon Isotopes 143

Peshkov, V.P., and V.M. Kuznetsov. Low Temperature Methods of Separating Helium Isotopes (He^3 - He^4) 149

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Bibergal', A.V., U.Ya. Margulis, and V.G. Khrushchev. Principles and Techniques of Using Radioactive Isotopes as High-energy Sources in Radiobiology and Medicine 175

Basic problems concomitant to planning and constructing radiation facilities are systematized according to the purpose of the facility. Descriptions and schematic drawings are given for some facilities classified as to purpose: a) experimental radiobiology, intended for low radiation of relatively small objects (animals, plants) b) experimental installations intended for radiation of various biological preparations of small size but

requiring high dosage (microorganisms, biological substrates) c) industrial radiation of biological products requiring sterilization, preservation, disinfection, etc. d) medical and therapeutical purposes.

Breger, A. Kh., V.A. Belynskiy, V.L. Karpov, S.D. Prokudin and V.B. Osipov. Facility for Radiation-Chemical Research Employing Co^{60} Gamma-Radiation Source With an Activity of 21,000 g-ev of Radium 182

A K-20000 Co^{60} gamma-radiation source, cited as the most powerful in the world according to available data, is described and basic parameters tabulated. The unit is provided with a control panel and a system of periodic observation and is capable of 1200 r/sec dosage per 0.4 liters and ~100 r/sec per 100 liters volume. Working chamber capacity is ~300 liters. The source, comprising 56 standard Co^{60} preparations, the authors state, is safe for attending personnel owing to a "dry" method especially developed for this unit.

Babushkin, A.V., I.V. Voznesenskaya, N.G. Zhirov, V.I. Zatulovskiy, and Yu.L. Khmel'nitskiy. Laboratory Employing Cobalt Emitters 189

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Gol'bek, G.R., and A.N. Vyal'shin. Pocket Radiometers and Dosimeters 238

General description and electric circuit diagrams are given for a pocket-sized radiometer intended for approximate determination of gamma- and hard beta-ray intensities above 1 Mev. Time lapse after onset of radiation registration serves as a parameter for the determination of intensity up to 1000 μr/hr with an accuracy of ± 20 percent. Working principle, components and electric circuit diagram are given for a pocket-size dosimeter capable of detecting approximate intensities of gamma- and beta-radiation from 0.1 to 5000 μr/sec and

and above 0.2 Mev, respectively.

Lantratov, M.F., V.Ye. Manoylov, and O.A. Myazdrikov. A Photocolorimetric Method of Beta-dosimetry 246

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Isotope Production (Cont.)

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Shtukkenberg, Yu.M., and V.I. Drobot. Employing a 4π-Counter for Absolute Measurement of Activity 270

Shtukkenberg, Yu.M., and V.I. Drobot. A Method Employing a 4π-Counter for Registering Internal-Conversion Electrons 278

Tissen, M.Yu. A Scintillation 4π-Counter With Stilbene Crystals for Absolute Measurement of Beta-activity. 285
This article describes a counter for the absolute measurement of beta-activity from 0.15 to 3.5 Mev. The instrument uses two standard stilbene crystals (30 mm diameter, 10 mm height) and photomultiplier FEU-19 or FEU-29. Correction factors are discussed and data on activity measurement are plotted.

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Card 12/12

BOCHKAREV, V. V. and YERSHOVA, Z. V.

"The System of Radiometric Measurements in the Application of Radioactive Isotopes."

paper to be presented at the 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.

21(5) SOV/89S-58-5-1/4

AUTHORS: Bochkarev, V. V., Kulish, Ye. Ye., Tupitsyn, I. F.

TITLE: Some Technical and Technological Problems in the Production of Radioactive Isotopes and Tracer Compounds in the USSR (Nekotoryye tekhnicheskiye i tekhnologicheskiye voprosy proizvodstva radioaktivnykh izotopov i mechenykh soyedineniy v SSSR)

PERIODICAL: Atomnaya energiya, 1958, Supplement 5, pp 5 - 25 (USSR)

ABSTRACT: In 1958, 110 radioactive isotopes were produced commercially. 92 of them were formed by neutron irradiation. Prior to the irradiation the initial materials must be purified, if possible, so that in the subsequent processing of the radioactive elements the impurity activities do not yield too much waste. Very often it is possible to carry out the irradiations with enriched isotopes such as Fe^{55}, Sn^{123}, Te^{127}, Se^{75}, Cd^{115}. The portions irradiated fluctuate between 0.5, 1.0, 10 and 20 cm^3 and were contained either in aluminum containers, boron-free glass bottles or plastic containers. The irradiation periods for isotopes with a half-life up to 3 days is 6, 9 or 15 hours. Isotopes with a half-life period of 3-30 days are

Card 1/4

irradiated for 30 days. Isotopes with a half-life of more than 30 days (S^{35}, Ca^{45}) are kept in the reactor for 90 days. For the production of the isotopes C^{14} and Cl^{36} the initial material is irradiated for 6 to 12 months. In order not to disturb the most favorable reactor flux distribution on the feeding of the reactor with the ampoules to be irradiated a load diagram of the single irradiation chambers was set up prior to the experiments. The feeding in the different channels is therefore carried out in such a way that the original flux distribution is maintained. The irradiated samples are treated radiochemically and the desired radioactive isotopes are separated. In certain cases certain compounds are marked by these radioactive isotopes. The still high amounts of the preparations are then divided and filled into smaller ampoules. In the USSR 280 of the 450 chemical compounds produced in the usual way were produced which are synthesized from C^{14}, S^{35}, H^{3}, P^{32}, Cl^{36}. For the production of tracer compounds only 1 or 2 initial materials are used for the isotopes mentioned above. In this connection it is often necessary to build-in the radioactive atoms into a

certain place of a polyatomic molecule. The transition into a complex organic compound takes place by synthesis or other radiochemical methods such as isotopic exchange, reactions with "hot"atoms etc.The production of chemical compounds traced with soft β radiators is carried out at a preparation activity of 100 mC until some C are attained; this is done in laboratories equipped with glove boxes. For the production of organic compounds marked with C^{14} mainly the synthetic method is applied using almost always $BaC^{14}O_3$ as an initial product. The possible intermediate products are listed in a table. The possibilities based on the synthetic method are mentioned by which various compounds marked with S^{35} can be obtained from barium sulfate as an initial substance. The discharge channels and boxes used in the laboratories are equipped with manipulators or gripping gloves. Moreover, they are equipped with filters collecting the aerosols and gaseous impurities. Furthermore, these rooms are equipped with own water, gas and vacuum supplies and dispose of special channels for the removal of radioactive waste products. Photographic

representations are shown of 4 types of these boxes. Other very important appliances used in these radioactive laboratories are remote-control tools such as tongs, pincers, mirrors etc. Remote-controlled cutting tools, soldering bits etc. play an important part too. For the manipulation of very small volumes of active liquid volumes hydromanipulators, automatic remote-controlled burettes and pipettes are used. It is possible, for instance, to decant volumes 0.1 - 100 ml in accurate doses by means of such a hydromanipulator. Before dispatch each preparation is closely examined. The physico-chemical constants, the content of the main components, the total and the specific activity, the share of the active and inactive impurities are determined. As an example it is described how the content of the γ-isomer Cl^{36m} is determined in a hexachlorane preparation not yet purified. The quantitative determination of small concentrations is carried out mainly by spectrum analysis or by the polarographic method. Marked preparations used for medical or biological purposes are additionally examined as to their content of physiologically important admixtures. There are 14 figures and 2 tables.

Bochkarev, V.V.

4) PHASE I BOOK EXPLOITATION SOV/2713

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 388 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): G.V. Kurdyumov, Academician, and I.I. Novikov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and nongraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

COVERAGE: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 32 reports on: 1) modern methods for the production of stable radioactive isotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by: S.V. Levinskiy, Candidate of Medical Sciences; V.N. Prusakov, Candidate of Chemical Sciences; and V.V. Sedov, Candidate of Medical Sciences. See Sov/2081 for titles of volumes of the set. References appear at the end of the articles.

16. Ebergal', A.V., V.L. Karpov, and V.I. Sinitsyn. Cobalt Sources of High Intensity for Radiative Action (Report No. 2234) 200

17. Gusev, N.G., Ye. Ye. Kovalev, and V.I. Popov. Gamma Radiation Inside and Outside Extended Sources (Report No. 2088) 211

18. Aglintsev, K.K., M.A. Bak, V.V. Bochkarev, Ye.G. Gracheva, Z.V. Yersheva, and K.A. Petrzhak. System of Radiometric Measurement of Radioactive Isotopes (Report No. 2087) 227

19. Aglintsev, K.K., V.P. Kasatkin, V.V. Mitrofanov, and V.V. Smirnov. Application of Nuclear Spectroscopy Methods to Beta and Gamma-ray Dosimetry (Report No. 2503) 237

20. Baranov, P.S., V.I. Gol'danskiy, and V.S. Roganov. Instrument for Measuring Small Streams of High-energy Neutrons (Report No. 2083) 244

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23. Rakitin, Yu.V. and A.V. Krylov. Studying the Transfer, Distribution, and Transformation of Certain Physiologically Active Compounds in Plants (Report No. 2133) 274

24. Gunar, I.I., Ye.Ye. Krastina, and A.Ye. Petrov-Spiridonov. Rhythm of Absorption and Secretion in Roots (Report No. 2233) 26?

25. Akhromeyko, A.I., and V.A. Shestakova. Effect of the Rhizospheric Micro-organisms on the Absorption and Secretion of Phosphorus and Sulfur by the Seedling Roots of Woody Plants (Report No. 2312) 306

26. Razumov, V.I., and N.D. Feofanova. Absorption of Phosphorus Tracers by Cultivated Plants in Relation to Their Resistance to Cold (Report No. 2313) 315

27. Andreyev, S.V., A.V. Voyevodin, V.A. Molchanova, and A.V. Khotyanovich. Some Results of Using Radioactive Isotopes for Plant Protection (Report No. 2309) 328

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~~Shtukkenberg Yu. M.~~

Bochkarev, V.V.

PHASE I BOOK EXPLOITATION SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): N.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labaznov; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

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BOCHKAREV, V. V.

PHASE I BOOK EXPLOITATION SOV/4054

Akademiya nauk SSSR. Institut nauchnoy informatsii

Khimicheskaya promyshlennost' SSSR (The Chemical Industry of the USSR) Moscow, Goskhimizdat, 1959. 457 p. Errata slip inserted. 4,100 copies printed.

Sponsoring Agency: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet.

Ed.: R. S. Ross; Tech. Ed.: F. V. Pogudkin; Editorial Board: A. P. Vinogradov, S. I. Vol'fkovich, N. M. Zhavoronkov, M. I. Ivanov, V. S. Kiselev, I. A. Lunacharskaya (Scientific Secretary), S. S. Medvedev, B. D. Mel'nik, A. N. Planovskiy, A. Ya. Ryabenko (Chief Ed.), and A. V. Topchiyev.

PURPOSE: This book is intended for the personnel of the chemical industry. It will be of interest to the general reader interested in the development and structure of the Soviet chemical industry.

COVERAGE: This book contains 18 articles on various aspects of the Soviet chemical industry. Among the developments in the production of raw materials for the manufacture of chemical products discussed are: 1) the use of raw materials synthesized from natural gas and petroleum to replace food products in the production of synthetic rubber, alcohol, detergents, etc.; 2) the production of acetylene from natural and petroleum gases for the synthesis of vinyl chloride, acrilonitrile, chloroprene, trichloroprene, 1, 4-butadiene, and other organic substances, based on methods developed by M. G. Kucherov, A. Ye. Favorskiy and others; 3) the production of acetylene from saturated hydrocarbons by cracking methane (and its homologs) at 1450° in an electric arc between two special electrodes in a gas reactor, by pyrolysis (thermal oxidation) of methane in an improved furnace designed by R. S. Grinenko, by high-temperature pyrolysis of propane and butane in tubular furnaces, or by other methods of producing acetylene for the production of synthetic rubber, ethyl alcohol, and other organic substances; 4) the synthesis of halogen derivatives of aliphatic hydrocarbons for the production of solvents, refrigerants, pharmaceutical products, etc., and 5) the production of rubber accelerators from nitrogen-containing aliphatic hydrocarbons. The history of plastics production in the Soviet Union is reviewed, and names, locations, and products of plants as well as the names of outstanding personalities in the field are given. The technical level and prospects of further development of different branches of the plastics industries are also discussed

along with methods of manufacturing plastic articles. A special apparatus designed by Ye. M. Mogilevskiy and designated "VA" which permits preparation of viscose solution in one operation is discussed. It is being used to replace the complex, conventional equipment with great savings in space. General trends in the technology of synthetic fiber production are also discussed. A historical review of synthetic rubber production and the achievements of outstanding Soviet scientists in this field are given as well as names, locations and products of synthetic rubber plants. Rubber production and the manufacture of rubber goods are similarly reviewed. Statistical data and outstanding personalities in the development of the aniline dyes, paints and lacquers, mineral fertilizers, insecticides and fungicides, sulfuric acid, soda, mineral salts, radioactive and stable isotopes, and chemical reagents industries are given. Catalytic processes and automation and automatic devices used in the chemical industry are also discussed. Thirty-eight photographs included in the book show outside and interior views of some Soviet chemical industry plants, as well as their manufacturing, material-handling and laboratory equipment. Numerous personalities and facilities are identified in the body of the text. References accompany individual articles.

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AUTHORS: Aglintsev, K.K., Bochkarev, V.V.

TITLE: The International Symposium on Metrology of Radioactive Isotopes

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 11, pp 64-65

ABSTRACT: A symposium on metrology of radioactive isotopes was held in Vienna from October 14 to 16, 1959. It was organized by the International Atomic Energy Commission. About 100 scientists from 27 countries participated. A total of 37 reports was read, 7 of them were reviews of radioactive measurement methods adopted in different countries. The USSR delegation (K.K. Aglintsev, V.V. Bochkarev, V.N. Grablevskiy, F.M. Karavayev) reported on measuring radioactivity in the USSR. Another report (by V.V. Bochkarev and V.A. Bazhenov) dealt with the results obtained when measuring the radioactivity of volatile liquids by their vapors.

Card 1/1

BOCHKAREV, V.V.

PHASE I BOOK EXPLOITATION SOV/4563

Metody polucheniya i izmereniya radioaktivnykh preparatov; sbornik statey (Methods for the Production and Measurement of Radioactive Preparations; Collection of Articles) Moscow, Atomizdat, 1960. 307 p. Errata slip inserted. 6,000 copies printed.

General Ed.: Valeriy Viktorovich Bochkarev; Ed.: M.A. Saguro; Tech. Ed.: N.A. Vlasova.

PURPOSE: This collection of articles is intended for scientific and technical personnel working in the production of radioactive isotopes.

COVERAGE: The collection contains original studies on methods of obtaining and measuring radioactive preparations. According to the foreword, the articles contain new data, and are of theoretical or practical interest to the extent that they discuss methods or give process information. In addition to several survey articles the collection contains discussions on the production of radioactive isotopes and inorganic radioactive preparations, including a number of carrier-free isotopes and several colloidal and other therapeutic preparations. Also discussed are methods for preparing a number of tagged organic compounds, problems in the analysis of tagged organic compounds, the absolute and relative measurement of activity, and the radiometric analysis of preparations. New instruments and equipment are described and instructions concerning measurement methods and technique are included. V.I. Levin, Candidate of Chemical Sciences, V.P. Shishkov, Candidate of Technical Sciences, I.N. Bukharov, Candidate of Biological Sciences, and V.I. Shostak, Candidate of Chemical Sciences, are mentioned as having helped directly in the selection and preparation of the material for publication. References accompany each article.

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AVAILABLE: Library of Congress (QD466.B47)

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AUTHORS: Aglintsev, K. K., Bochkarev, V. V.

TITLE: Scientific and Technical News. International Conference on Metrology of Radioactive Isotopes

PERIODICAL: Atomnaya energiya, 1960, Nr 1, pp 76-78 (USSR)

ABSTRACT: This is a report on the International Conference on Metrology of Radioactive Isotopes which was held in Vienna on October 14-16, 1959. The relative materials will be published by the International Atomic Energy Agency.

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BOCHKAREV, V.V.

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PHASE I BOOK EXPLOITATION SOV/5410

Tashkentskaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Tashkent, 1959.

Trudy (Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy) v. 2. Tashkent, Izd-vo AN UzSSR, 1960. 449 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR.

Responsible Ed.: S. V. Starodubtsev, Academician, Academy of Sciences Uzbek SSR. Editorial Board: A. A. Abdullayev, Candidate of Physics and Mathematics; D. M. Abdurasulov, Doctor of Medical Sciences; U. A. Arifov, Academician, Academy of Sciences Uzbek SSR; A. A. Borodulina, Candidate of Biological Sciences; V. N. Ivashev; G. S. Ikramova; A. Ye. Kiv; Ye. M. Lobanov, Candidate of Physics and Mathematics; A. I. Nikolayev, Candidate of Medical Sciences; D. Nishanov, Candidate of Chemical Sciences; A. S. Sadykov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Uzbek SSR; Yu. N. Talanin,

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instruments used, such as automatic regulators, flowmeters, level gauges, and high-sensitivity gamma-relays, are described. No personalities are mentioned. References follow individual articles.

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AREF'YEVA, Z.S.; BOCHKAREV, V.V.; MIKHAYLOV, L.M.; TIMOFEYEV, L.V.

Protection from inhibitory radiations of radioactive isotopes.
Med.rad. no.7:77-82 '61. (MIRA 15:1)
(RADIATION PROTECTION) (RADIOISOTOPES—SAFETY MEASURES)

AREF'YEV, Z.S.; BOCHKAREV, V.V.; MIKHAYLOV, L.M.; TIMOREYEV, L.V.

Utilization of supplementary external packaging for the transportation of radioactive preparations. Med.rad. 6 no.3:68-71 '61. (MIRA 14:5)

(RADIOISOTOPES)

BOCHKAREV, V.V.

Radioactive preparations for clinical radiology. Med.rad. 6 no.8:3-8 Ag '61. (MIRA 14:8)
(RADIOISOTOPES) (RADIOLOGY, MEDICAL)

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AUTHORS: Aref'yeva, Z. S., Bochkarev, V. V., Mikhaylov, L. M., Tikofeyev, L. V.

TITLE: Attenuation of gamma radiation from Co^{60}, Cs^{137}, and Au^{198} by a lead shield of cylindrical shape

PERIODICAL: Atomnaya energiya, v. 11, no. 2, 1961, 186-187

TEXT: The authors measured the attenuation of gamma radiation from Co^{60}, Cs^{137}, and Au^{198} sources of an activity of 1000-10,000 μc by a cylindrical lead shield by means of an air-equivalent chamber (0.6 l) which had been placed at a distance of 17.5 or 25 cm from the sources. At these distance, the sources may be regarded as point sources. An integrating device of the type AA(DD) served as a recorder. The distances mentioned above were chosen because of the dimensions of an additional "disciplining" packing, as is used in a novel type of transport packing for radioisotopes (cf. Z. S. Aref'yeva et al. "Meditsinskaya radiologiya", No. 3, 68 (1961)). The shield was provided by a set of lead cylinders (in a number of six, each having a

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5-mm wall and a height of 330 mm), as well as a set of semicylinders of the same wall thickness. In this experiment, the maximum shield thickness was 100 mm. The source was positioned on the axis of the smallest cylinder (20 mm in diameter). The shield thickness augmented in the direction toward the detector. The system was arranged such that the axes of the cylindrical ionization chamber and of the set of cylinders were perpendicular to the line connecting the said axes in the middle, and perpendicular to one another. Simultaneously, the attenuation by a plane-parallel shield (lead sheet, 500·450·5 mm) was measured for the same sources which were 1 cm away from the lead surface. The attenuation curves were likewise taken for distances of 17.5 and 25 cm between source and detector. The shield thickness likewise augmented toward the detector. In all cases, measurements at a distance of 17.5 cm agreed with those at 25 cm within the measurement accuracy (10%). No general quantitative conclusions can as yet be drawn from the measurements regarding the effect of the shield shape upon the attenuation of radiation; at any rate, the cylindrical shield was evidently more effective. The ratio between the attenuation degrees of the cylindrical and of the plane shield ($\eta = K_{cyl}/K_{pl}$) of equal thickness (in μd units) was a function of E_γ and of the shield thickness. For the source - detector distances concerned,

Attenuation of gamma radiation ...

η passed through a maximum for $\mu d \approx 3\text{-}5$. For γ-quanta with energies of 0.411 Mev (Au^{198}), 0.667 Mev (Cs^{137}), and 1.25 Mev (Co^{60}), η was equal to 2.2, 1.7, and 1.3, respectively. There are 3 figures and 1 Soviet-bloc reference.

SUBMITTED: December 29, 1960

Card 3/3

BOCHKAREV, V.V., red.; SMIRNOVA, A.M., red.; SMIRNOV, M.A., red.; POPOVA, S.M., tekhn. red.

[Measuring technique for radioactive preparations] Tekhnika izmerenii radioaktivnykh preparatov. Moskva, Gosatomizdat, 1962. 191 p. (MIRA 16:1)
(Radioactive substances—Measurement)

PHASE I BOOK EXPLOITATION SOV/6333

Bochkarev, V. V., ed.

Tekhnika izmereniye radioaktivnykh preparatov; sbornik statey (Techniques for the Measurement of Radioactive Preparations; Collection of Articles) Moscow, Gosatomizdat, 1962. 4600 copies printed. 214 pp.

Eds.: A. M. Smirnova and M. A. Smirnov; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for specialists in nuclear instrumentation.

COVERAGE: The book is a collection of articles on recent developments in 1) measurement of the activity and 2) analysis of the composition of emissions of radioactive preparations. The methodology and apparatus used in these studies are described in detail. References are given at the end of each article.

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BOCHKAREV, V.V., red.; PODOSHVINA, V.A., red.; ALYAB'YEV, A.F., red.; VLASOVA, N.A., tekhn.red.

[Production and application of radioisotopes; selected papers by foreign scientists]Poluchenie i primenenie radioaktivnykh izotopov; izbrannye doklady inostrannykh uchenykh. Pod red. V.V.Bochkareva. Moskva, Gosatomizdat, 1962. 287 p. (MIRA 15:11)

1. Mezhdunarodnaya konferentsiya po primeneniyu radioizotopov v fizicheskikh naukakh i promyshlennosti, Copenhagen, 1960. (Radioisotopes)

BAZHENOV, V.A.; BOCHKAREV, V.V.

Absolute measurement of the activity of beta-radioactive liquids. Izm.tekh. no.1:55-57 Ja '62. (MIRA 14:12)
(Radioactivity--Measurement)

S/115/63/000/002/008/008
E194/E155

AUTHORS: Bazhenov, V.A., Bochkarev, V.V., and Sokolova, T.N.

TITLE: Sorption effects in measuring the radioactivity of gases

PERIODICAL: Izmeritel'naya tekhnika, no.2, 1963, 57-59

TEXT: In measuring the radioactivity of gases with gas-filled radiation counters, the absorption of β-radiation by the walls and end-effects cause errors which have both been thoroughly discussed, particularly in the non-Soviet literature. However, there are also two sorption effects: some of the material becomes firmly attached to the walls and remains there after the chamber has been nominally swept free; and some becomes temporarily attached to the walls during measurements, so disturbing them, but is afterwards released and swept out, so that the effect cannot be directly observed. Tests were made to determine the relative importances of these effects. A chamber, filled with a gas tagged with a source of β-radiation, has a thin mica window in one end over which is placed an end counter. The chamber also contains a layer of material of such a thickness as to absorb β-particles of maximum energy.

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Then if this layer is placed next to the window without breaking vacuum, the counter records only β-particles from substances attached to the inner surface of the mica and to the surface of the layer. It can be confirmed that radiation originating in the gas filling of the chamber is not being counted by withdrawing the layer and inserting an analogous layer between the mica window and the counter. This gives the background level. After sweeping the chamber, the background contamination due to irreversible sorption can be determined. The actual experimental chamber, made of duralumin, was 178 mm long and 50 mm diameter with a window of 1 cm^2. A disk with 12 positions could be placed at various distances in front of the window so that the material of the layer could be altered without breaking vacuum or changing the gas. The gas used was CS_2 tagged with S^{35} with a specific activity of 25 milliCurie per gram of liquid carbon disulphide. Surface sorption was studied on the following materials: teflon, mica, special lubricant for CS_2, brass, aluminium, methylmethacrylate, polished and unpolished ebonite, rubber mastic and sheet vacuum-rubber. The experimental procedures are described in some detail. The materials were found to fall into two groups: the first

instantaneously acquire a certain surface activity which then increases exponentially with time (PVC, ebonite, methylmethacrylate). The other group includes the remaining materials except the rubber mastic, in which surface activity instantaneously reaches a certain value which then remains constant. The relative sorptions of samples of the different substances, i.e. the percentage of the radioactivity picked up by 1 cm^2 of the given surface to the activity of 1 cm^3 of the chamber was; teflon 5; mica 5; brass 6.5; aluminium foil 6.5; methylmethacrylate 13; PVC 28; polished ebonite 30; rubber mastic 39; rubber 45; unpolished ebonite 65. For materials of the first group the calculation is made for an exposure time of 26 hours. From these data it is possible to assess the sorption of CS_2 in particular experimental equipment. Thus the activity of CS_2 sorbed on the walls of the measuring chamber filled with radioactive carbon disulphide was directly measured. A large proportion of the sorption was reversible and so is not revealed by background measurements after cleaning. The sorption effects are very considerable, and differ for different materials. There are 4 figures.

BOCHKAREV, V.V.; KRONGAUZ,A.N.; SOKOLOVA,T.N.; TIMOFEYEV,L.V.

Determination of the dose of radiation from 8-applicators.
Med.rad. 8 no.2:66-73 F'63 (MIRA 16:11)

*

L 44813-65 EWT(m)/EWA(h)

ACCESSION NR: AP5008339 S/0115/65/000/001/0048/0050

AUTHOR: Barycheva, L. Ya.; Denisikov, A. I.; Dorofeyev, G. A.; L'vova, M. A.; Bochkarev, V. V.; Garapov, E. F.; Gryaznov, Yu. N.

TITLE: Comparison of various methods of activity measurements by beta and gamma radiations

SOURCE: Izmeritel'naya tekhnika, no. 1, 1965, 48-50

TOPIC TAGS: radioactivity, radioactivity measurement, radioactive preparation

ABSTRACT: For evaluating the methods and accuracies of activity measurements, a number of Co^{60} and Fe^{59} preparations were tested in the laboratories of GK AE SSSR and Health Ministry SSSR. These methods were used: (1) Beta-gamma coincidence (stilbene detector and NaI(Tl) crystal); (2) Gamma-gamma coincidence; (3) Two 4π-beta proportional flow counter; (4) End-window counter; (5) Ionization chambers. The absolute measurements by methods 1, 2,

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L 48813-65
ACCESSION NR: AP5008339

and 3 were found to be correct to within ±1%. Measurements with F^{69} were less accurate because of the low specific activity of solutions (gamma) and complicated decay mode (beta-gamma). Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NO REF SOV: 005 OTHER: 003

Card 2/2

L'VOVA, M.A.; BOCHKAREV, V.V. (Moskva)

Imitators of short-living iodine isotopes. Med. rad. 10 no.9:90-91 S '65. (MIRA 18:10)

L 09154-67 EWT(m)
ACC NR: AP7002769 SOURCE CODE: UR/0089/66/021/002/0141/0142

AUTHOR: Bazhenov, V. A.; Bochkarev, V. V.; Golubev, Yu. M.; Levin, I. V.; Sokolova, T. N.; Turkin, A. D. 15

ORG: none

TITLE: Measurements of activity of radioactive gases by means of spherical ionization chamber 19

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 141-142

TOPIC TAGS: ionization chamber, radioactivity measurement

ABSTRACT: A spherical, 24-cm ionization chamber with a copper barrier, filled with air under atmospheric pressure and operating in the -spectrum energy range (0.15 to 2.20 Mev) was used for measuring the gas activity in experiments with ^{133}Xe, CO_2 (labeled with ^{14}C), ^{131}Xe, ^{85}Kr, and ^{41}Ar gases. The gas activity was determined by means of compensation counters. The order of error was about 2.5%. The results showed that only ^{14}C, ^{85}Kr, and ^{41}Ar with simple spectra could be used, while ^{133}Xe and ^{131}Xe, with their conversion electrons, could not be used. The average current magnitudes K per particle in the chamber were correlated with the theoretical values and the results agreed within 25 to 30%. Orig. art. has: 1 figure and 1 table. [NA]

SUB CODE: 18 / SUBM DATE: 19Jul65 / ORIG REF: 002 / OTH REF: 001

Card 1/1 nst UDC: 543.52.539.107.42

0925 1647

BOCHKAREV, Ya. V., Cand Tech Sci -- (diss) "Hydraulic seal-automatic machines for the foothill zone canals." Tashkent, 1960. 23 pp; with charts; (Academy of Agricultural Sciences Uzbek SSR, Tashkent Inst of Engineers in Irrigation and Mechanization of Agriculture); 175 copies; price not given; (KL, 17-60, 151)

BOCHKAREV, Ya.V., aspirant

Investigating and calculating automatic water-actuated tilting gates for maintaining the headwater level of hydraulic structures. Trudy SANIIRI no. 104:23-57 '59. (MIRA 14:1)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut irrigatsii.
(Sluice gates)

BOCHKAREV, Ya.V., aspirant

Developing and investigating water-actuated automatic gates of constant flow. Trudy SANIIRI no. 104:59-79 '59. (MIRA 14:1)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut irrigatsii.
(Sluice gates)

BOCHKAREV, Ya.Z.

[Boring at high speeds] Burit' na vysokikh skorostiakh. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1953. 54 p. (MLRA 7:5)

1. Burovoy master tresta Tuymazaburneft' Ya.Z.Bochkarev. (Petroleum--Well-boring) (Boring)

SOV/115-59-7-21/33

9(2,3)

AUTHOR: Bochkarev, Ye.P.

TITLE: A Visual Cathode-Ray Curve Tracer for Transistors

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 7, pp 44-47 (USSR)

ABSTRACT: The author describes a cathode-ray curve tracer for determining a group of eight characteristics of nonlinear elements, transistors, vacuum tubes, etc. For this purpose an EO-7 or a similar oscillograph may be used. Fig.1 shows a diagram of the principal circuits of the cathode-ray curve tracer for three-electrode elements. The master oscillator produces a sawtooth voltage of 400 cycles which synchronizes the operation of the other stages. The master oscillator is composed of a 6Zh4 pentode in a transitron circuit. The amplifier stage contains one 6N8 tube. The differential amplifier consists of two 6Zh4 tubes. The output stage is composed of two parallel 6P9 tubes. The device consists of two sections, one contains the measuring circuits while the second houses the power feed unit. The power feed unit consists of two rectifiers and two electronic stabilizers of +300 and -300 volts. Not more than 250 watts are required for the operation of this device. Tests

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A Visual Cathode-Ray Curve Tracer for Transistors

showed good results. Fig.5 shows the output characteristics of a P2A transistor plotted with the experimental model. The characteristics of low-power electronic triodes, pentodes, etc. may be plotted with insignificant modifications of the apparatus. There are 2 circuit diagrams, 1 block diagram, 1 voltage diagram, 1 photograph and 4 Soviet references.

BOCHKAREV, Ye.P.

Generator and phase meter of infralow frequencies. Izm.tekh. no.1:44-45 Ja '63. (MIRA 16:2)
(Frequency measurements)

BOCHKAREV, Yu.A., zhurnalist-mezhdunarodnik; BEYKIN, V.A., red.; MILOVANOV, I.V., red.; POTEKHIN, I.I., red.; SHVEDOV, A.A., red.; ALENT'YEVA, N., red.; DANILINA, A., tekhn. red.

[Guinea today; from a journalist's notebook] Gvineia segodnia; iz zapisnoi knizhki zhurnalista. Moskva, Gos. izd-vo polit. lit-ry, 1961. 86 p. (MIRA 14:8)
(Guinea—Politics and government) (Guinea—Economic conditions)

Bochkareva A A.

USSR / Human and Animal Morphology. Sensory Organs. S-4

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64863.

Author : Bochkareva, A. A.
Inst : Not given.
Title : Neurohistological Changes of the Cornea in Iridocyclytes and Glaucoma.

Orig Pub: Vestn. oftal'mologii, 1956, No 3, 7 - 10.

Abstract: In the natural substance of the normal cornea ramified loop-shaped receptor formations have been found. There are also receptor formations in the form of glomeruli, principally on the periphery of the cornea, near the limbus corneae. More often, they are located under the epithelium .? In the epithelium of the cornea nerve fibers appear, knob-like nerve terminals, and occasionally terminal laminae of irregular shape.

Card 1/2

BOCHKAREVA, A. A., Cand Med Sci -- (diss) "Nerves of the cornea in glaucoma absolutum and traumatic iridocyclitis." Kuybyshev, 1957. 10 pp (Kuybyshev State Med Inst), 200 copies (KL, 1-58, 120)

MIKHAYLOV, S.S., prof., red.; SHAYKOV, A.D., kand. med. nauk, zam. red.; OLIFSON, L.Ye., dots., red.; VILESOV, S.P., prof., red.; MITROFANOV, V.G., doktor med. nauk, red.; PERVUSHIN, V.Yu., dots., red.; BOCHKAREVA, A.A., dots., red.; PIS'MENOV, I.A., ass., red.

[Nineteenth Scientific Session of the Orenburg State Medical Institute] XIX Nauchnaia sessiia Orenburgskogo Gosudarstvennogo meditsinskogo instituta. Orenburg, 1962. 144 p. (MIRA 16:11)

1. Orenburg. Gosudarstvennyy meditsinskiy institut. 2. Zaveduyushchiy Gospital'noy khirurgicheskoy klinikoy Orenburgskogo meditsinskogo instituta (for Vilesov). 3. Zaveduyushchiy kafedroy operativnoy khirurgii Orenburgskogo meditsinskogo instituta (for Mikhaylov). 4. Zaveduyushchiy fakul'tetskoy khirurgicheskoy klinikoy Orenburgskogo meditsinskogo instituta (for Mitrofanov). 5. Zaveduyushchhya Kafedroy glaznykh bolezney Orenburgskogo meditsinskogo instituta (for Bochkareva). 6. Zaveduyushchiy kafedroy obshchey khimii Orenburgskogo meditsinskogo instituta (for Olifson).

(ANATOMY, SURGICAL AND TOPOGRAPHICAL)
(MEDICINE, INTERNAL)

SOKOLOVEROVA, I.M.; BOCHKAREVA, A.A.; VOLODINA, Ye.P.; OLEKS, S.; TSINBERG, Ye.

Effect of repeated instillations of insulin into the conjunctival sac on the course of alloxan diabetes. Biul. eksp. biol. i med. 53 no.4: 64-66 Ap '62. (MIRA 15:4)

1. Iz kafedry patologicheskoy fiziologii (zav. - dotsent I.M. Sokoloverova) i kafedry glaznykh bolezney (zav. - dotsent A.A. Bochkareva Orenburgskogo meditsinskogo instituta (dir. - dotsent S.S.Mikhaylov). Predstavlena deyatvitel'nym chlenom AMN SSSR V.V.Parinym).

(DIABETES) (INSULIN) (CONJUNCTIVA)

BALAKINA, I.A.; BOCHKAREVA, A.I.; GORZHEVSKAYA, A.V.; KAPLAN, A.S.; SMOLYARENKO, D.A., kand. tekhn.nauk; TERENT'YEV, Ye.A.; SOTS, G.A.; TREMBITSKIY, Ya.V.; ULINSKAYA, Ye.I.; KHUTORSKAYA, Ye.S., red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Technical specifications in effect on products of ferrous metallurgy; list as of October 1, 1961] Deistvuiushchie tekhnicheskie usloviia na produktsiiu chernoi metallurgii; perechen' po sostoianiiu na 1 oktiabria 1961 g. Moskva, Metallurgizdat, 1962. 141 p. (MIRA 15:5)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Iron industry--Tables and ready-reckoners)
(Steel industry--Tables and ready-reckoners)

S/028/62/000/003/005/005
D221/D302

AUTHORS: Balakina, I.A., and Bochkareva, A.I.

TITLE: New technical conditions for manufacturing ferrous metallurgy

PERIODICAL: Standartizatsiya, no. 3, 1962, 57-59

TEXT: During the third quarter of 1961, 20 new marks of steel received the technical specifications from TsNIIChM and other scientific research organizations. UMTU (ChMTU) TsNIIChM 548-61, 549-61 and 550-61 cover the delivery of trial batches of hot rolled and forged rods, etc. in high alloy corrosion resistant steel ЭП (EP) 309, the chemical composition of which is indicated. The similar specifications 540-61 and 541-61 concern the thick high-strength stainless steel and welding wire. They are intended as replacements of chrome-nickel austenitic stainless steel and are delivered in both untreated and hardened condition. The norm 526-61

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New technical conditions for ...

specifies trial order of discs and cylinder forgings in the new chrome, nickel and niobium steel ЭП(EP) 302. The forgings are tested for intercrystalline corrosion, macrostructure and mechanical properties at both room and 500°C temperature. Specification 545-61 covers rods and forgings of high-stress chrome-nickel-molybdenum steel ЭИ(EI) 310, delivered in annealed condition. 554-61 concerns the chrome-tungsten-vanadium-molybdenum steel ЭП 311 (ВНС-6) (EP311(VNS-6)) in rods, and treated. 534-61 is specified for sample rods in 17НМ(17 NM) steel, which represents an economy of nickel when compared to 16NM although it reveals higher strength after hardening. 537-61 concerns rods in 17ХН2 (17KhN2) steel for drill heads. The supplement to specifications ChMTU 3024-56 covers the delivery of pipe skelp in steel 55ХФА(55KhFA), which has a greater carbon content than a similar 50KhFA steel. 559-61 covers forgings and blanks in the higher stress constructional steel 40Х3ФА (40Kh3FA) as a replacement of nickel steel. 527-61 extends to rolled sections in easily welded high strength low-alloyed steel 09Г2Ф(М) (09G2T (M)) and 16ГФ(3Н) (16GT (3N)). 546-61 regulates the delivery of thick plates and profiles in 10Г2С(10G2S) steel, for structural purposes. Its chemical composition

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New technical conditions for ...

is similar to 10Г2СД(10G2SD) with the exception of copper and silicon addition. 551-61 covers thick plates of 10G2S steel after thermal treatment. 538-61 concerns samples of 65Г(65G) and 60С2 (60S2) steels both round and die-forged for pre-stressed concrete structures. 560-61 was developed for ingots in 25ХСНВФА(25KhSNVFA) steel. 515-61 covers high temperature alloy strip of mark ЭИ894 (EI894). 521-61 specifies the delivery of hot rolled stainless sheets in steel 10Х16Н4БА(ЭП56) 10Kh16N4BA (EP56)). 524-61 deals with hot rolled thick corrosion resistant steel with chrome, nickel, manganese and nitrogen of mark ЭП222 (EP222), and chrome-nickel-niobium-nitrogen steel EP 223. 517-61 concerns the hot rolled rods of П18Ш (P18Sh) steel. Forged discs in steel ЭИ961Ш (EI 961Sh) obtained by the electroslag method are covered by 553-61. Pipe skelp in EI878 steel is specified in 513-61, whereas trial batches in pipes of the same steel are governed by ЧМТУ УКРНИТИ (ChMTU UKRNITI) 254-61.

Card 3/3

SMOLYARENKO, D.A., kand.tekhn.nauk; BOCHKAREVA, A.I., inzh.

New materials in ferrous metallurgy. Metalloved. i term. obr. met. no.12:50-53 D '62. (MIRA 16:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Steel--Metallurgy)

ACC NR: AP6009132 SOURCE CODE: UR/0028/65/000/009/0063/0063

AUTHOR: Balakina, I. I.; Bochkareva, A. I.; Gorzhevskaya, A. V.

ORG: none

TITLE: Standard specifications for high-alloy steel ingots for pipe manufacture

SOURCE: Standartizatsiya, no. 9, 1965, 63

TOPIC TAGS: plasticity, steel, high alloy steel, hot rolling, pipe, solid mechanical property, metal heat treatment, OKh19N10T steel, Kh19N10T steel, OKh19N12T steel, Kh18N12T steel

ABSTRACT: The authors presented a general review of the new, revised standard specifications (ChMTU/TsNIIChM-1345-65) for high-alloy steel ingots used for pipe manufacture. The specifications were revised and adopted (some of them only tentatively) by the Central Scientific Research Institute of Ferrous Metallurgy and were intended to replace the previous standards ChMTU/TsNIIChM-700-62 and TU-752. It was specified that ingot diameters of 80 to 270 mm are to be used for seamless pipes. In this connection, it was mentioned that the Soviet metallurgical mills cannot produce high-alloy steel ingots greater than 200 mm. Chemical compositions of steels were specified in accordance with GOST-9940-62, GOST-9941-62 and GOST-5632-61. In order to diminish the effect

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ACC NR: AP6009132

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of embrittlement at hot rolling, the alloy min. - max. percentages in certain steels were limited. Mechanical properties (tensile strength, etc.) of hot-rolled ingots were adopted in accordance with the standards for hot-rolled pipes without precising however the conditions of heat treatment. The diameters of ingot samples used for macrostructure tests were extended up to 120 mm. Alpha-phase numbers must not exceed 2 for steels OKh18N10T, Kh18N10T, OKh18N12T and Kh18N12T. A number 2.5 is allowed only upon mutual agreement. It was recommended to test ingots for plasticity by using the method of hot torsion. Finish allowance for ingot surfaces was accepted in accordance with the GOST-2789-59 standards.

SUB CODE: 11/ SUBM DATE: None / ORIG REF: 000 OTH REF: 000

Card 2/2 MJ

L 36949-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JG/AT/WH
ACC NR: AP6018640 (A) SOURCE CODE: UR/0422/66/000/005/0087/0087

AUTHOR: Arone, R. G.; Balakina, I. A.; Bochkareva, A. I.; Stetsenko, B. A.; Sokolovskiy, P. I.

ORG: none

TITLE: A standard for low-alloy structural steel

SOURCE: Standarty i kachestvo, no. 5, 1966, 87

TOPIC TAGS: construction material, structural steel, alloy steel, welding evaluation, mechanical property / 16GS steel, 09G2S steel, 10G2S1 steel

ABSTRACT: A series of innovations in low-alloy structural steels (GOST 5058-65) based on recent work done at the Central Scientific Research Institute for Ferrous Metallurgy is described. Nineteen new grades of high strength low-alloy steel containing small amounts of carbide and nitride forming elements (Ti, V, Zr, Nb) were developed. Higher quality and performance are claimed for the new materials and suitable applications are recommended. The steels were melted in standard Martens furnaces and oxygen-converted. While the majority are used in the hot-rolled condition, they may be heat-treated to yield strengths of 40-50 kg/cm^2 with a saving of 20-30% in material. The heat-treated steels possess lower brittle fracture tendencies and slight aging sensitivity. Phosphorus and sulfur contents of the steels were maintained within strict limits (below

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ACC NR: AP6018640

0.035%) to prevent brittle impact behavior (sulfur) or intercrystalline carcking in welds (phosphorus). Impact properties at low temperatures were also improved, grade "a" maintaining good properties to -40°C and some grades to -70°C. Superior mechanical properties in thick sections are guaranteed: steels 16GS, 09G2S and 10G2S1 are produced in thicknesses ranging from 4 to 160 mm.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

TAGER, A.A.; BOCHKAREVA, A.P.; DVORETSKAYA, N.M.

Investigating the hardening of silicon organic resins. Part 1: Hardening of resins prepared by the hydrolysis and condensation of tetraethoxysilane. Vysokom.soed. 1 no.4:511-517 Ap '59. (MIRA 12:9)

1. Ural'skiy gosudarstvennyy universitet.
(Resins, Synthetic) (Ethyl silicates)

CZECH

Catalytic transformation of alcohols into hydrocarbons of the divinyl series. XVI. The possibility of catalytic formation of divinyl from ethyl alcohol through 1,3-butanediol. Yu. A. Gorin, K. N. Charskaya, and A. V. Bochkareva (A. A. Zhdanov State Univ., Leningrad). *Sovmest. Deyat. Otdelen. Khim.* 2, 818-22 (1953); cf. *C.A.* 44, 7218g. —The formation of $(CH_2:CH)_2$ (I) in the passage of 1,3-butanediol (II) over the Lebedev catalyst or over its separate dehydrogenating and dehydrating components was studied at 250-400°. The greatest yield of I, 15-19.5%, was attained on the dehydrating component, while the yield of I from the complete catalyst was only 7-9%. II is rather unstable at 300-400° in contact with these catalysts and is totally decompd.; at 250° some of it remains undecompd. on the dehydrogenating catalyst. The main course of the reaction over the complete catalyst and over its dehydrative component is the formation of C_4H_6. When II is added to EtOH during the reaction over the catalyst, the yield of I (in comparison with that formed from EtOH alone) declines and the yield of C_4H_6 rises. Among the reaction products of mixts. of EtOH and AcH over the dehydrogenative component of the catalyst it is possible to detect some II if the reaction temp. is relatively low. The course of the catalytic formation of I from EtOH does not appear to utilize II as an intermediate step (Ostromyslenskii, *C.A.* 10, 3179). G. M. Kosolapoff

All-Union Sci. Res. Inst. of Synthetic Rubber imeni Acad. S. V. Lebedev

Lab. imeni S. V. Lebedev, Leningrad State Univ.

BoCHKAREVA, G.P.

3

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SOV/20-125-6-25/61

AUTHORS: Nesmeyanov, A. N., Academician, Reutov, O. A., Corresponding Member AS USSR, Tolstaya, T. P., Ptitsyna, O. A., Isayeva, L. S., Turchinskiy, M. F., Bochkareva, ~~G. P.~~

TITLE: Organometallic Compounds Prepared From Double Salts of Halogen Metals and Halogenoniums (Metalloorganicheskiye soyedineniya iz dvoynykh soley galoidnykh metallov i galogenoniyev)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1265-1268 (USSR)

ABSTRACT: The present paper adds two further types, (III) and (IV), to the two rather similar reaction types (I) and (II) of the synthesis of organometallic compounds. Hg, Tl, Sn, Pb, As, Sb, and Bi may appear as metal $M^{(n)}$ in the method of diazonium double salts (Ref 1); Cu, Zn, Fe, as well as $M^{(p)} = M^{(n)}$ as metal $M^{(p)}$ for various combinations. In the method of iodonium double salts (Ref 2) Hg, Sn, Sb, and Bi were investigated as $M^{(n)}$ which gave a good yield of corresponding organometallic

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compounds. The same metal $M^{(n)}$ is usually used as $M^{(p)}$, sometimes, however, Zn or Cu. The corresponding decomposition reactions were carried out by the authors in an acetone solution. For this purpose the same metal powder was used as was chosen by O. A. Reutov and O. A. Ptitsyna for diphenyl iodonium salts. The course and the results of these new reactions were found to be completely similar to those of the last-mentioned salts. This is a new confirmation of a similarity of all diaryl halogenoniums. Phenyl mercury iodide with yields of 22 and 55% is produced by decomposition of the double salts of diphenyl chloronium iodide and of diphenyl bromonium iodide with HgJ_2 by powdered copper in acetone at low temperature. Diphenyl-tin-dichloride with yields of 57 and 55% is produced by decomposition of the double salts of diphenyl chloronium- and diphenyl bromonium with $SnCl_4$ by powdered tin. The decomposition of the corresponding double salts of antimony powder leads to a mixture of phenyl-dichlorostibine, diphenyl-chlorostibine, and a small quantity of organo-antimony triaryl compounds. Triphenyl bismuth is produced by decomposition of the bismuth-trichloride

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double salts by bismuth powder. According to the analysis it is assumed that the double salts of antimony-trichloride and of bismuth-trichloride form mixtures of the compounds: $[(C_6H_5)_2Hal^+]MeCl_4^-$ and $[(C_6H_5)_2Hal^+]_2MeCl_5^{--}$. Table 1 gives 11 decomposed salts, the decomposition temperature and calculated as well as actually obtained results of the analysis, table 2 shows the decomposition reactions of the aforesaid double salts with the halides of heavy metals. The double salts of triphenyl-oxonium either do not react at all with the metal powders under the given experimental conditions, or only with a change of the anion part of the double salt. The cation of triphenyl-oxonium is not changed and does not form organometallic compounds. Thus this method is restricted by the inapplicability of oxonium- and (as is expected by analogy) of ammonium salts. The authors finally try to explain this behavior of triphenyl-oxonium salts. There are 2 tables and 11 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) Institut

Card 3/4

ANDRIANOV, K.A.; BOCHKAREVA, G.P.; PRELKOVA, A.G.; SOKOLOV, N.N.

Polyanhydrides from phthalic and mixed phthalo-adipic acids.
Vysokom.soed. 2 no.5:793-796 My '60. (MIRA 13:8)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. V.I. Lenina.
(Phthalic acid) (Adipic acid) (Anhydrides)

L 1458-65 EWT(m)/EPF(c)/EWP(j)T Pc-4/Pr-4 ASD(m)-3/AFETR RM

ACCESSION NR: AP4048203 S/0191/64/000/011/0017/0019

AUTHOR: Prelkova, A. G.; Bochkareva, G. P. B

TITLE: Polymerization of compounds KGMS-1 and KGMS-2 at room temperature

SOURCE: Plasticheskiye massy*, no. 11, 1964, 17-19

TOPIC TAGS: polymerization, benzoyl peroxide, cumene hydroperoxide, cobalt naphthenate, dimethylaniline, polymerization catalyst, unsaturated polyester, polymerization accelerator/compound KGMS-1, compound KGMS-2

ABSTRACT: The polymerization of compounds KGMS-1 and KGMS-2, which are solutions of unsaturated polyesters in styrene, was investigated at room temperature with benzoyl peroxide and cumene hydroperoxide as catalysts, and cobalt naphthenate and dimethylaniline as accelerators, alone or together. The experiments with dimethylaniline as an accelerator and benzoyl peroxide as a catalyst showed that the rate of reaction and the amount of heat evolved at a constant catalyst content increase with increasing amount of accelerator. With cumene hydroperoxide and dimethylaniline, the rate of polymerization is very slow and the material remains liquid even after 48 hours at room temperature. With dimethylaniline and benzoyl peroxide, KGMS-2 polymerizes much more slowly than KGMS-1.

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L 14508-65
ACCESSION NR: AP4048203

For KGMS-2 at room temperature, not less than 0.1% of accelerator must be added. With 1% cumene hydroperoxide and dimethylaniline, both compounds remain liquid after 48 hours at room temperature. Studies of the polymerization of KGMS-1 with cobalt naphthenate and cumene hydroperoxide showed that to polymerize 100g KGMS-1, 0.05% dimethylaniline must be added, while to polymerize 500 g of KGMS-1, 0.02% is enough. In this case, the polymerization ends in 20-22 hours at room temperature without cracking. During the polymerization of 100 g of KGMS-2 with cobalt naphthenate and dimethylaniline, at least 0.1% of dimethylaniline must be added, while for 100 g of KGMS-1, 0.05% is enough. It was also established that to polymerize 500 g of KGMS-2 at room temperature, the best results are obtained with the addition of 0.2% benzoyl peroxide, 0.055% cobalt naphthenate and 0.02% dimethylaniline. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 008

Card 2/2

AGAFONOVA, V.A.; BRENNAYA, L.D.; BOCHKAREVA, I.I.; VITES, V.G.; GEGECHKORI, N.M.; DYATLOVA, O.A.; YEFIMOVA, Z.A.

Spectrum analysis of high-melting metals: tungsten and molybdenum. Fiz.sbor. no.4:44-51 '58. (MIRA 12:5)
(Tungsten--Spectra) (Molybdenum--Spectra)

BOCHKAREVA, I. K.

KAZAKOVA, M.P., inzhener; KHRULEVA, I.K., inzhener; BOCHKAREVA, I.K., inzhener.

New electric detonators of immediate and short-delay effect. Gor. zhur. no.4:60-63 Ap '57. (MLRA 10:5)
(Detonators) (Blasting)

15.8170

27568
S/190/61/003/009/003/016
B110/B101

AUTHORS: Andrianov, K. A., Pichkhadze, Sh. V., Bochkareva, I. V.

TITLE: Polyorganotitanosiloxanes. I. Synthesis of poly-bis-(acetylacetonate) organotitanosiloxanes

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 9, 1961, 1321-1325

TEXT: As the formation of polymers with linear chains is rendered difficult owing to the hydrolytic instability of the Ti-O-C bond of the alkoxy derivatives of orthotitanic acid, the authors tried to use intracomplex titanium derivatives. The present paper deals with the cohydrolysis of alkyl-(aryl-) chlorosilanes with bis-(acetylacetonate) dichlorotitanium (BADT). In the cohydrolysis of dimethyl dichlorosilane (DMDS), diethyl dichlorosilane (DEDS), methyl-phenyl dichlorosilane (MPDS), and methyl-vinyl dichlorosilane (MVDS) with BADT, the yield of polymers with Ti-O-Si chains is only 35% in the absence of acceptors, since 60% BADT does not react. It hydrolyzes with separation of acetylacetonate groups and formation of TiO_2. The polymers which are well soluble in conventional solvents

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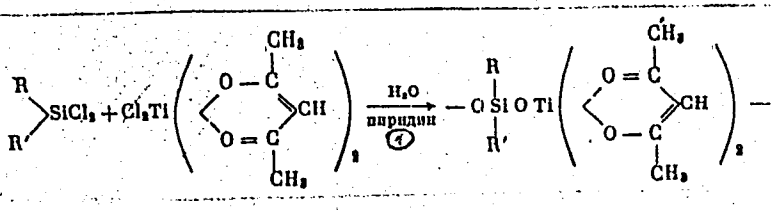
Polyorganotitanosiloxanes. ...

have low melting points. The organic radicals at the Si atoms have little effect on cohydrolysis. The ratio Ti : Si is smaller in the polymers than in the initial substances. Pyridine increases the yield of cohydrolysis of DMDS + BADT to 57.6% of DEDS + BADT to 70.5%, of MVDS + BADT to 62%, and of MPDS + BADT to 63.8%. Ultimate analysis and infrared spectra indicate the following reaction:

1 = pyridine.



(A)

In the cohydrolysis of DMDS + BADT and DEDS + BADT the atomic Si/Ti ratio of polymers was 1 : 1 with the following composition of the repeating unit of the chain:

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